Peer Reviewed International Research Journal of Geography
Maharashtra Bhugolshastra Sanshodhan Patrika
ISSN : 0971-6785 {Impact Factor 3.687 (IIFS)} Vol. 33,No.2, Jul-Dec. 2016.pp 20-25

IMPACT OF URBANISATION ON CROP CULTIVATION IN NAGPUR DISTRICT 2001 -02 TO 2011 -12

Seema S Malewar

Abstract:

The population explosion in the past few decades has brought about a drastic change in the life styles of the citizens of our country and the exposure to the internet and media has brought a positive change towards health consciousness of the younger generation of today, with organic foods and dietary supplements making a dent in the monthly budget of middle class and the upper middle class of the society.The most positive effect of the overall scenario is that the uneducated farmers of yesteryears are no longer to be seen and the realms have been handed over to the more educated and tech-savy present generation of youngsters who have the required information regarding farming at their finger tips thanks to the Internet and Smart phones.

The farmers have become smarter and wiser in deciding the type of Agricultural produce they should cultivate depending on the need of the hour and of course their own financial betterment in order to keep pace with the rising demand of agricultural produce due to the fast paced population growth all over the world.

In the present paper an attempt has been made to study the changing trends of crop cultivation in Nagpur district of Maharashtra state, covering a period from 2001 -02 to 2011- 12. The tehsil wise population data for the same period has considered and the different available techniques and methods have been used to analyse the collected data and arrive at a finite conclusion regarding the impact of urbanisation on the crop cultivation.

Introduction :-

The famous theory of Evolution of Charles Darwin ``Survival of the Fittest `` is very apt in today`s world in general and agriculture in particular. Due to the tremendous growth of human population world -wide, with the depleting forests and agriculture land which is being replaced by Concrete Jungles it is not only a challenge for the today`s agriculturist but also a threat to his sheer existence and survival in order to cope up with the ever growing demand the Agriculturist has to think one step ahead to become successful in his venture, hence there is no reason to wonder as to why so many educated doctors, Engineers and MBAs are leaving their well paying lucrative jobs in metro cities and taking up Agricultue with Passion and Gusto.

With the phenomenal increase in the population the demand for agricultural produce too is rising at an astronomical pace which has to be catered for with the available resources at hand which includes manpower , Agricultural Equipment and land., of these the manpower and Agricultural equipments can be manipulated as per requirement and convenience but the available land which can not be increased in any way, therefore an optimum land use and planning in order to get the maximum yield and monetary gains is the need of the hour. This has no doubt necessitated the study of changing trends in crop cultivation in Nagpur district.

Objectives :-

To assess the impact of urbanisation on crop cultivation in Nagpur District Of Maharashtra state for the decadal period from 2001 - 02 to 2011 -12.

Study Area :-

Nagpur is a city and winter capital of the state of Maharashtra, the largest city in central India and third largest city in Maharashtra after Mumbai and Pune. With a population of 46,53,171 (2011). Nagpur Metropolitan City is 13th largest urban conglomeration in India. It has also been ranked as the

cleanest city and the second greenest city of India. Nagpur is also a major commercial and political centre of Vidarbha region of Maharashtra and is also famous throughout the country as Orange City .
The Nagpur district lies between latitude 200 35`- 210 44`North and Longitude 780 15` - 790 40` East and comprises of 14 tehsils, it stretches over an area of 9892 sq.km.Nagpur district has a tropical wet and dry Climate with dry conditions prevailing for most of the year. It receives rainfall of (47.44 inch) from monsoon rains during June to September. Summers are extremely hot from March to June. Winter lasts from November to January, during which temperature can drop below 10 oC (50oF).The highest recorded temperature in the city was 49 oC on 29 May 2012 ,while the lowest was 3 oC.

Nagpur District

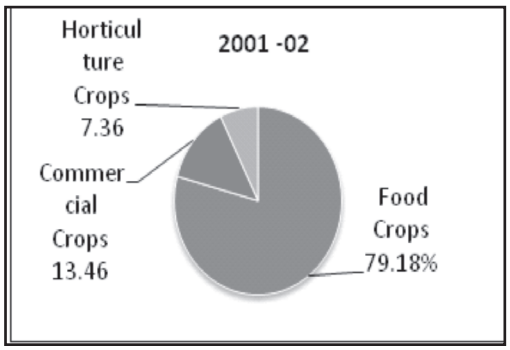
Database and Methodology :-

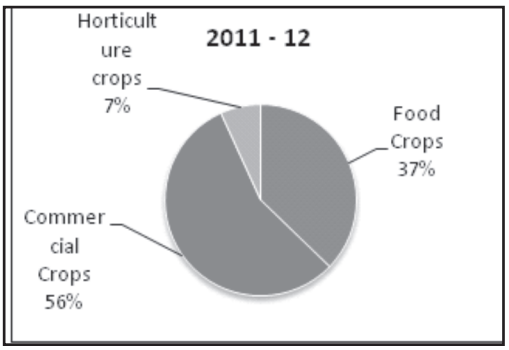
This study is purely based on secondary data obtained from socio economic review of Nagpur district (2001-02 & 2011-12) and Dept of Agriculture, Government of Maharashtra, Pune.
The data analysis has been carried out on a decadal basis 2001-02 to 2011 – 12 and processed using various statistical methods & cartographic techniques.

Sr. No.	TEHSILS	FOOD CROPS (Hectare)	COMMERCIAL CROPS (Hectare)	HORT & PLANT CROPS (Hectare)	GCA (Hectare)	AREA SOWN TWICE (Hectare)	NSA (Hectare)
1	NAGPUR(U)	624	454	82	1160	243	917
2	NAGPUR®	7447	21343	3646	32436	4078	28358
3	HINGNA	10612	40149	1633	52394	2490	49904
4	KAMTHI	9308	21095	1544	31947	16564	15383
5	KATOL	19648	33952	6315	59915	10133	49782
6	NARKHED	16787	32406	6399	55592	9042	46550
7	SAONER	14320	27334	3008	44662	6633	38029
8	KALMESHWAR	11057	22529	5940	39526	3603	35923
9	RAMTEK	20493	6811	1740	29044	845	28199
10	PARSHIONI	14979	20706	3502	39187	5395	33792
11	MOUDA	48891	18488	2293	69672	13607	56065
12	UMRED	17510	39903	1930	59343	15134	44209
13	BHIVAPUR	15539	35777	1610	52926	13404	39522
14	KUHI	22879	43056	673	66608	9257	57351
	TOTAL	230094	364003	40315	634412	110428	523984

Sr. No.	TEHSILS	FOOD CROPS (Hectare)	COMMERCIAL CROPS (Hectare)	HORT & PLANT CROPS (Hectare)	GCA (Hectare)	AREA SOWN TWICE (Hectare)	NSA (Hectare)
1	NAGPUR(U)	2568	407	534	3509	2500	1009
2	NAGPUR(R)	35979	7462	3960	47401	12644	34757
3	HINGNA	32329	11164	3464	46957	9823	37134
4	KAMTHI	27994	1621	2372	31987	6510	25477
5	KATOL	57132	4167	7041	68340	13160	55180
6	NARKHED	54100	6115	7389	67604	12220	55384
7	SAONER	40292	10660	4865	55817	16630	39187
8	KALMESHWAR	30925	9178	5457	45560	16367	29193
9	RAMTEK	26421	8198	1975	36594	7386	29208
10	PARSHIONI	34868	4085	2773	41726	10509	31217
11	MOUDA	48885	4449	2178	55512	10388	45124
12	UMRED	49807	6402	1791	58000	13416	44584
13	BHIVAPUR	49304	2379	1217	52900	6563	46337
14	KUHI	52481	15165	984	68630	8092	60538
	TOTAL	543085	91452	46000	680537	146208	534329

Percentage Change In Area Under Crop Categories (2001 – 2012)





Interpretation :-

The crops have been broadly divided into three categories namely
(a)The Food Crop, (Rice , Wheat, Jowar, Bajra, Maize, Pulses,Cereals),
(b)Commercial crops (Sugarcane, Spices, Oilseeds, Herbs and Cotton)
(c) Horticulture Crops (Fruits & vegetables)

Food Crop :-In the year 2001 -02 the maximum area under food crop was 93.2%of Bhivapur tehsil and the minimum area was 67.88 % of Kalmeshwar tehsil, however in 2011-12 the maximum area under food crop decreased to 70.56% (Ramtek) and the minimum area under food crop decreased to 20.25% of Hingna Tehsil.

Commercial Crop :- The maximum area under commercial crops in 2001 – 02 was 23.77% of Hingna Tehsil and the lowest was 4.49% of Bhivapur tehsil. However in 2011 – 12 the maximum area under Commercial crop increased tremendously by 222.38% to 76.63% of

Sr. No.		2001 - 02			2011 - 12		
	TEHSILS	Food crops	COMMERCIAL CROPS	Hort. & Plant. Crops	Food crops	COMMERCIAL CROPS	Hort. & Plant. Crops
		(%)	(%)	(%)	(%)	(%)	(%)
1	NAGPUR(U)	73.18	11.6	15.2	53.79	39.14	7.07
2	.....	75.9	15.74	8.35	22.96	65.8	11.2
3	HINGNA	68.85	23.77	7.38	20.25	76.63	3.12
4	KAMTHI	87.52	5.06	7.42	29.14	66.03	4.83
5	KATOL	83.6	6.09	10.3	32.79	56.67	10.5
6	NARKHED	80.02	9.04	10.9	30.2	58.29	11.5
7	SAONER	72.19	19.1	8.72	32.06	61.2	6.74
8	KALMESHWAR	67.88	20.14	12	27.97	57	15
9	RAMTEK	72.2	22.4	5.4	70.56	23.45	5.99
10	PARSHIONI	83.56	9.79	6.65	38.22	52.84	8.94
11	MOUDA	88.06	8.01	3.92	70.17	26.54	3.29
12	UMRED	85.87	11.04	3.09	29.51	67.24	3.25
13	BHIVAPUR	93.2	4.49	2.3	29.36	67.6	3.04
14	KUHI	76.47	22.1	1.43	34.35	64.64	1.01
	AVERAGE %	**79.18**	**13.46**	**7.36**	**37.24**	**55.93**	**6.82**

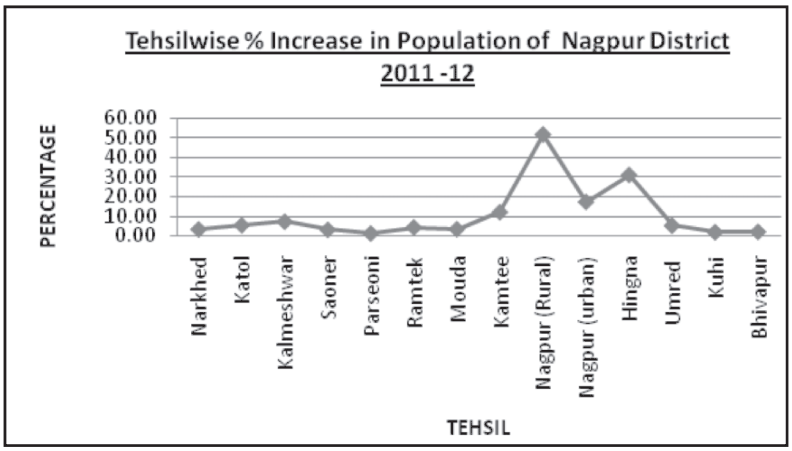
Hingna tehsil and the minimum area under Commercial crop also increased by 422.27% to 23.45% of Parshioni

Horticulture & Plants Crop:-

The maximum area under Horticulture and plant crops in the year 2001 – 02 was 15.2% of Nagpur (Urban) and the minimum area was 1.43% of Kuhi tehsil however in 2011 – 12 the maximum area under Horticulture & plant crops was unchanged at 15% (Kalmeshwar) and the minimum area under the crop decreased marginally to 1.01%(Kuhi)

Tehsil Wise Change In Population Of Nagpur District 2001 - 2011

S NO	Tehsil	Population			% increase
		2001	2011	Increase	
1	Narkhed	143512	147980	4468	3.11
2	Katol	155665	163841	8176	5.25
3	Kalmeshwar	114400	122455	8055	7.04
4	Saoner	223165	229613	6448	2.89
5	Parseoni	141731	143220	1489	1.05
6	Ramtek	151628	157911	6283	4.1 4
7	Mouda	135627	140016	4389	3.24
8	Kamtee	212003	237354	25351	11.96
9	Nagpur (Rural)	199401	302663	103262	51.79
10	Nagpur (urban)	2052066	2405421	353355	17.22
11	Hingna	185115	242581	57466	31.04
12	Umred	146843	154292	7449	5.07
13	Kuhi	124194	1263 16	2122	1.71
14	Bhivapur	81630	83164	1534	1.88
	Total	**4066980**	**4656827**	**589847**	**14.50**



Conclusion & Suggestions :

On detailed study of the region it is observed that the average decrease in the area under food crop from 2001 – 02 to 2011 – 12 has been 41.94%, whereas the area under commercial crop in the region in the corresponding period shows an increase of 176.67% and the area under Horticulture crop has reduced marginally from 7.36% in 2001 – 02 to 6.82% in 2011 – 12.

This clearly reflects a shifting trend amongst the Agriculturists of the region to opt for Commercial crops thereby deviating from the traditional Food crops. and Horticulture & plant crops. The North and North- western tehsils of Nagpur dist namely Ramtek, Parseoni,Narkhed, Katol, Saoner, Kalmeshwar and parts of Hingna come under the Orange producing belt of the region hence a trend towards Cultivation of Horticulture crops is obvious, the phenomenal increase in the commercial crops in the Central, Northern, South western and Eastern parts of the district is attributable to the fact that quite a few Soyabean Oil Extraction factories have cropped up in Nagpur as well as the adjoining dist of Bhandara and Amravati. The tremendous increase in the Area under commercial crops of Bhivapur , Umred & Kuhi tehsils is due to the famous chilly of Bhivapur and also due to the presence of Sugar Factory at Umred .

The average percentage increase in the population .of Nagpur district is 14.50% however the percentage increase in population of Nagpur Rural is the highest at 51.79% and that of Hingna is 31.04% which is due to the fact that many Corporate houses like INDO RAMA Synthetics, Morarjee Textiles , Grindwell Norton, KEC International, M&M , NECO group of Industries just to name a few set up their production facilities at MIDC Hingna, Butibori , which also saw many ancillary units cropping up thus creating a mass exodus of Skilled, Semiskilled and Unskilled Labours from the adjoining tehsils to Nagpur (Rural) and Hingna tahsils.With the fast changing scenario of Nagpur District the so called helpless , Uneducated & dumb farmer of yester years became smarter and shifted his focus on the commercial crop rather than depending on the traditional Food crop as a result it was a win – win situation for the farmers as well as the Industrialists in the region.

References :

(a) Bhal S K, R S Prasher & P Mehta(1997)`` Diversification of Indian Agriculture – Issues and prospective``, Indian Journall Of Agriculture economy

(b) Department of agriculture , Pune ,Maharashtra

(c) District cencus handbook Nagpur district, (1991 – 92, 2001 – 02 , 2011 – 12)

(d) Saha Jaydeep ``Crop diversification in Indian Agriculture with special reference to Emerging crops``, Journal if the IIG Vol 35 No1 Winter 2013.

(e) Tiwari Ramchandra and Singh Brahmanand,(2013): Agriculture Geography pp 134,135

***Dr Seema S Malewar**
Vasantrao Naik Govt Institute Of
Arts & Social Sciences.
Nagpur